UPDATE TO THE BOARD

in advance of the September 25, 2020
Board of Trustees Meeting

Key Updates

President Emeritus Arnold Weber passes
Northwestern University President Emeritus Arnold R. Weber died Aug. 20 at his Northbrook home. He was 90. Weber served as Northwestern’s 14th president, from 1985 to 1994, and presided over a decade of growth and prosperity that strengthened the University financially and academically and put it on a path to national prominence as a research powerhouse.

COVID-19 Updates

Fall Quarter Changes
As of Friday, August 28, Northwestern changed its return to campus plan to limit the number of students for Fall Quarter 2020. This decision was made in consultation with the Special Trustee Committee and experts at Northwestern Medicine, by studying the increasing rate of COVID-19’s spread in the suburban Chicago area, and learning from the experiences of peer institutions whose campuses already opened. These changes are designed to preserve the on-campus experience for as many third- and fourth-year undergraduates as possible, allow for more quarantine and isolation space on campus, and respond to the pandemic’s spread. With limited exceptions, first- and second-year undergraduate students will not be allowed on campus, including in residence halls, and will begin the academic year on a remote-only basis. They are encouraged not to return to Evanston during the Fall Quarter. Third- and fourth-year undergraduates, graduate students and professional students will be allowed on campus for Fall Quarter as previously scheduled. Undergraduate move-in was delayed to begin September 12, and undergraduate classes began September 16, as planned. Sorority and fraternity houses will be closed for Fall Quarter. A refined Wildcat Wellness quarantine period will be implemented upon the return to campus. Deferral options, student housing support, and emergency aid resources have been provided to students. In recognition of the disruption of these late changes and the effects of COVID-19 on undergraduate students and their families, a 10% reduction in tuition for the Fall Quarter was implemented after approval by the Board of Trustees.

Testing and Symptom Monitoring
Northwestern’s COVID testing and symptom monitoring processes were developed and implemented in partnership with Northwestern Medicine. Students returning to campus this fall are required to undergo multiple phases of testing and regularly scheduled testing thereafter. Testing of graduate students and off-campus undergraduate students is also underway. Symptom Tracker, a daily health monitoring application that aims to help reduce the spread of COVID-19 within the community, is designed for daily health monitoring of faculty, students, staff and visitors.
Return to Campus Discussion Series
The University has been conducting frequent interactive webinars intended to answer stakeholder questions and to inform the Northwestern community about ongoing plans for conducting research and teaching during the COVID-19 pandemic. These webinars have addressed a variety of topics, such as student health and safety, guidance for international students, and academic planning for the Fall Quarter. Since launching in mid-July, these virtual discussions have been attended by over 12,000 individuals.

Northwestern’s Sponsored Research Funding Jumps to $886 Million
Northwestern increased its annual sponsored research funding to $886 million in FY 2020, which closed on August 31. This figure reflects an 11 percent increase over the previous year, when funding totaled a record-setting $798.3 million. This year’s achievement is a continuation of Northwestern’s exceptional growth trend, which is outstanding among Northwestern’s peer group. Growth was led by a 20 percent increase in award funding for Feinberg School of Medicine, which attracted more than $640 million in sponsored awards and accounts for nearly three-quarters of total funding. Biomedical research continues to be Northwestern’s most active area, while other areas including nanotechnology, energy and sustainability, and quantum science have also advanced.

Undergraduate Admissions
As the 2020-2021 academic year begins, admissions numbers continue pointing to a stellar incoming class. As of September 16, the first-year class enrolling for fall 2020 totals 1,907. Northwestern has received deposits from 133 Chicago Public Schools students (up from 122 last year) and 23 Evanston Township High School students (down from 27 last year). Preliminary numbers also indicate African American students make up 11% of incoming students (down slightly from last year), while Latinx students account for 17.1% of known domestic students (up from 14.7% last year). The average SAT score for the incoming class is 1491. In total, Northwestern received 39,293 first-year undergraduate applications for fall 2020 admission, a small decrease from last year’s applicant pool and a 22.4% increase from five years ago. Incoming students who have elected to defer to start in Winter Quarter total 79; undergraduates who defer admission may do so each quarter this year but must begin by Fall 2021. An additional 86 students deferred until Fall 2021.

Leadership Updates
Kathleen Hagerty named Northwestern provost
Kathleen Hagerty has been named Northwestern’s provost. Previously serving as interim provost since April 1, Hagerty becomes the first woman provost since the University was founded in 1851. Hagerty previously served as associate provost for faculty and as interim dean of the Kellogg School of Management. A distinguished scholar, she started her Northwestern career at Kellogg more than three decades ago and holds the First Chicago Professorship in Finance. As provost, Hagerty is the University’s chief academic officer and an ex officio member of the faculty of each school. President Schapiro noted, “She has been instrumental in helping guide Northwestern through the COVID-19 pandemic, providing strong leadership when we have needed it most.”
William H. McLean to step down as vice president and chief investment officer

William H. McLean, Northwestern’s vice president and chief investment officer since 2002, will be leaving the University on October 16, 2020, to become President and Chief Investment Officer for the University of Richmond’s Spider Management. McLean is currently a trustee at Richmond and board chair of Spider Management. Under McLean’s leadership at Northwestern, the endowment grew from approximately $3.3 billion to $10.9 billion as of July 31, 2020, and support to the operating budget from the endowment over his 18 years in the role totals nearly $5.3 billion. McLean has been an exceptional leader for investments and a strong part of Northwestern’s senior administration. Within the Investment Office, McLean built a leading team of professionals with a breadth and depth of experiences that enabled Northwestern to partner with many of the world’s leading investment firms and deliver strong and consistent performance. McLean leaves behind a firm foundation for Northwestern’s investment program and strong partnership with the Investment Committee and Investment Subcommittee. The search committee for a permanent replacement is comprised of University Trustees and administrative leadership, co-chaired by Trustee Timothy Sullivan, chair of the Investment Committee, and Craig Johnson, senior vice president for business and finance. Interim leadership of the Investment Office will be jointly held by four managing directors, with investment decisions made as a group under the guidance of Johnson.

E. Patrick Johnson named School of Communication dean

E. Patrick Johnson, whose award-winning work focuses on the areas of race, class, gender, sexuality, and performance, has been named the next dean of the School of Communication, succeeding Barbara O’Keefe. Johnson, the Carlos Montezuma Professor of African American Studies and Performance Studies, is also the first African American to be hired and tenured in Northwestern’s Department of Performance Studies, and the first to be given a named professorship in the School of Communication. Said Johnson: “While I understand the symbolism of my being the first African American appointed to this post — and particularly during a global pandemic and persistence of antiblack racism — my focus as dean will be leading with a moral and ethical imperative to make the School of Communication a place where ‘first’ only refers to our ranking in the world.”

James Speta named interim dean of Northwestern Pritzker School of Law

James Speta, vice dean and Elizabeth Froehling Horner Professor of Law, has been named interim dean of Northwestern Pritzker School of Law, effective August 1. He succeeds Northwestern Law Dean Kimberly Yuracko, who has transitioned to a new role in the Office of the Provost as associate provost for academic projects. A member of the faculty since 1999, Speta’s research interests include telecommunications and Internet policy, antitrust, administrative law and market organization. The search committee for the permanent dean will be selected and charged to begin work in the fall quarter. The Office of the Provost is also in the process of selecting an outside search firm.

Kelly E. Mayo named interim dean of The Graduate School

Kelly E. Mayo, associate dean for research and graduate studies at the Weinberg College of Arts and Sciences, was named interim dean of The Graduate School (TGS) and associate provost for graduate education at Northwestern University, effective June 1. A
professor of molecular biosciences, Mayo holds the Walter and Jennie Bayne Professorship and has served as chair of the Department of Molecular Biosciences. Mayo is meeting with graduate student leaders and other University stakeholders, as well as assessing the recent Program Review feedback to determine the strategic priorities and scope of The Graduate School going forward. Northwestern’s Organizational Strategy and Change office is assisting in this endeavor.

Financial Update
The finance team continues to analyze and manage the pandemic’s financial impact on Northwestern. Management is also now focusing on the fiscal year end and the reporting and audit activities involved in measuring financial activity for 2020. The FY 2020 budget is on track to be balanced and an update will be provided at the Board’s September meeting.

Over the summer, a number of actions were taken to both continue the expense mitigation strategies implemented in the spring as well as to further stem the pandemic’s financial impact. The University continued to defer most capital investments, defer all non-essential spending, suspend staff hiring with limited exceptions, and continued to suspend all faculty and staff retirement contributions.

On August 28, the University decided to de-densify the campus for Fall Quarter. Financial impacts stemming from that decision included decreased room and board revenue, lost tuition from the undergraduate rate reduction of 10% for the fall, and several dozen undergraduate academic deferrals for the Fall Quarter. These are in addition to expenses already incurred to prepare for a return to campus, such as a testing infrastructure and preparation of quarantine and isolation space for students.

Liquidity and Debt Management
Treasury, Investments, and Budget and Planning continue to collaborate closely with respect to liquidity monitoring, planning, and debt management in support of the University’s operating and capital needs.

Investments
The preliminary market value of the Long-Term Balanced Pool on June 30, 2020 was $10.9 billion. For the quarter ended June 30, 2020, the Pool returned 10.9 percent as equity markets rebounded from the first-quarter drop caused by the Covid-19 Pandemic. This preliminary return includes over 90 percent of the second quarter valuations for the illiquid portfolios.

Development
As of July 31, 2020, Northwestern had $375.2 million in new gifts and commitments raised towards the $575 million fiscal year goal, compared with $407.5 million last year at the same time. The net amount raised without Northwestern Medicine giving from related entities is $258.9 million, compared to $288.9 million for the same period last year. The “We Will” Campaign has raised $4.935 billion to date, or 99% of the total $5 billion goal.
Academic Updates

Faculty News

National Academy of Sciences elects three faculty to its ranks

Three Northwestern faculty members were among 120 new members and 26 new international members elected this past spring to the prestigious National Academy of Sciences (NAS). Membership in the Academy is one of the highest honors given to a scientist in the United States. Yonggang Huang, Walter P. Murphy Professor of Civil and Environmental Engineering and Mechanical Engineering, develops models for stretchable and flexible electronics. His work has led to major advancements in bio-integrated electronics for health monitoring. Huang was also elected to the American Academy of Arts and Sciences this year. Samuel Stupp, Board of Trustees Professor of Materials Science and Engineering, Chemistry, Medicine, and Biomedical Engineering, works to integrate chemistry with materials science, biology and medicine. The overarching interest of his research group is the development of self-assembling organic materials, focusing on functions relevant to energy and medicine. One of his landmark achievements was the development of bioactive materials that can signal cells and be used in novel therapies for regenerative medicine. Stupp holds memberships in the National Academy of Engineering and the American Academy of Arts and Sciences, among others. Laura DeMarco, formerly the Henry S. Noyes Professor of Mathematics, was also elected to NAS in the spring before departing for a position at Harvard University over the summer.

Chemist will receive prestigious scientific prize for organic materials research

Organic chemist William Dichtel has been named the National Laureate in Chemistry by the 2020 Blavatnik National Awards for Young Scientists. The highly prestigious award, bestowed by the Blavatnik Family Foundation, recognizes America’s most accomplished and impactful researchers under the age of 42. The first Blavatnik laureate ever from Northwestern, Dichtel was selected for his research into highly porous two- and three-dimensional organic materials, which can be used to store, detect and separate small molecules and ions. Using these methods, researchers can design and tailor materials with high surface areas for specific functions, including storing energy and purifying drinking water. Dichtel is a faculty member in the Weinberg College of Arts and Sciences and is also affiliated with Northwestern’s interdisciplinary Center for Water Research. Dichtel will receive $250,000, the largest unrestricted scientific prize offered to young American researchers. In addition to the laureate for chemistry, the Blavatnik Foundation also recognizes distinction in two other knowledge domains: the life sciences as well as the physical sciences and engineering. The three laureates were selected from a pool of 305 nominees from 161 research institutions across the United States. Two other Northwestern faculty members also were finalists for the national awards: Julius Lucks, a professor of chemical and biological engineering at the McCormick School, was a finalist in the life sciences category; Emily Weiss, the Mark and Nancy Ratner Professor of Chemistry at Weinberg College, was a finalist in the chemistry category.

Teri Odom honored by Royal Society of Chemistry

Chemist Teri Odom has received the 2020 Centenary Prize from the Royal Society of Chemistry. The prestigious award, given annually to three chemists outside Great
Britain, recognizes scientists for high-impact research and exceptional communications skills. An expert in designing structured nanoscale materials, Odom received the award for her research into multi-scale materials that enable new ways to achieve ultrafast, coherent and directional light emission at the nanoscale. Odom is the chair of Northwestern’s chemistry department and the Charles E. and Emma H. Morrison Professor of Chemistry in the Weinberg College of Arts and Sciences. She is also affiliated with the International Institute for Nanotechnology and the Chemistry of Life Processes Institute. Odom’s research focuses on designing structured nanoscale materials with extraordinary size- and shape-dependent properties. She has pioneered a suite of multi-scale nanofabrication tools that have resulted in nanoparticle lattice optics that can manipulate light at the nanoscale, plasmon-based nanoscale lasers that exhibit tunable color and anisotropic nanoparticle probes for imaging.

Weinberg professors John Alba Cutler and Leslie M. Harris named Radcliffe Institute Fellows
Weinberg College of Arts and Sciences professors John Alba Cutler and Leslie M. Harris were selected as 2020-2021 Radcliffe Institute Fellows. Based at the Radcliffe Institute for Advanced Study at Harvard University, the Radcliffe Institute Fellowship Program annually supports the work of 50 leading artists and scholars and has rapidly become one of the most competitive programs of its kind in the world. The acceptance rate for the incoming class was 2.8 percent, from a pool of nearly 1,400 applicants. Cutler, associate professor of English and Latina/o Studies and interim director, Latina and Latino Studies Program, specializes in U.S. Latino/a literatures, multiethnic American poetry, contemporary American literature and print culture studies. Harris is a professor of history and African American studies. Her first body of work on New York City challenged the prevailing view of slavery as a phenomenon of the southern United States, with little impact or importance in the North. More recently, she has been involved with public history projects that have expanded the understanding of slavery in the northern United States, in higher education and in urban areas.

2019-20 Notable Faculty Hires
Ben Antieau, Professor of Mathematics, joins Northwestern from University of Illinois at Chicago where he was a tenured Associate Professor. His area of research is in pure mathematics, specifically the fields of algebraic geometry and algebraic topology. Algebraic geometry is about the geometry of the solutions of polynomial equations, while algebraic topology is about a more qualitative notion of “shape,” suitable to working up to deformations, or up to stretching without breaking.

Marcelo Bonini, PhD, Professor of Medicine, joins Northwestern from the Medical College of Wisconsin where he was Professor of Medicine and Biophysics and led programs in innate immunity and redox biology. Bonini’s research focuses on breast cancer and is expected to synergize with programs of the Robert H. Lurie Comprehensive Cancer Center.

Ryan Chornock, Professor of Physics and Astronomy, joins Northwestern from Ohio University where he was Assistant Professor of Physics and Astronomy, prior to which he spent five years as a postdoctoral researcher at the Harvard-Smithsonian Center for Astrophysics. Chornock studies the various astronomical events whose existence are
transient in nature. These rare events are found by large surveys of the sky at visible wavelengths and mostly represent supernovae, the final explosions in the lives of stars, but occasionally have even more exotic origins. He uses spectroscopy obtained at some of the largest telescopes in the world as a tool to identify these objects and decode their properties.

Ben Golub, Associate Professor of Economics and Computer Science, joins Northwestern from the Harvard Department of Economics. Golub’s research in economic theory focuses on social and economic networks and related topics. This work has examined various topics at the intersection of economics and network theory. These include the dynamics of learning and disagreement, the vulnerability of networks of financial relationships to sudden disruption, and how network theory can help in the design of negotiations to provide a public good such as the eradication of a disease. He has received the Calvó-Armengol International Prize (2020, awarded every two years to a top researcher in economics or the social sciences younger than 40 years old for his or her contribution to the theory and comprehension of the mechanisms of social interaction) and an NSF CAREER grant (2019).

Paul Gowder, Professor of Law, joins Northwestern from The University of Iowa College of Law. Prior to beginning his career in academia, Gowder served as an Associate Attorney with Victor M. Glasberg and Associates, a small firm focusing on civil rights and public interest work, and as a Staff Attorney with the Oregon Law Center. As an educator, Gowder teaches or has taught courses in constitutional law, torts, critical race theory, and quantitative and computational legal reasoning.

Itai Gurvich, Professor of Operations, returns to the Kellogg School of Management from Cornell University where he was a Professor in the Operations Research and Information Engineering Department. From 2008-2016 he served on the Operations faculty at Kellogg and received tenure from Northwestern University in 2014. His research interests include performance analysis and optimization of human-operated processing networks, the theory of stochastic-process approximation and the application of operations research and statistical tools to healthcare processes.

Luisa Iruela-Arispe, PhD, Professor of Cell and Developmental Biology, joins Northwestern from the University of California, Los Angeles, where she had served as Vice Chair of the Department of Molecular, Cell and Developmental Biology and Director of the Molecular Biology Institute. Iruela-Arispe is widely regarded as one of the top researchers in vascular biology. She was recruited to Northwestern University to provide leadership as Chair of the Department of Cell and Developmental Biology.

Elias Katsanis, PhD, Professor of Pediatrics, joins Northwestern from Duke University where he was Director of the Center for Human Disease Modeling. Katsanis has worked to facilitate collaboration across disciplines and to develop physiologically relevant tools to study variation found in human patient genomes. He will serve as the Associate Chief Research Officer for Translational Research at the Stanley Manne Children’s Research Institute (SMCRI) and Lurie Children’s Hospital.
Igor Koralnik, MD, Professor of Neurology, joins Northwestern from Rush University Medical Center where he was Chair of the Department of Neurological Sciences. Koralnik conducts research on progressive multifocal leukoencephalopathy as well as neurological diseases related to viral infections more generally. He will provide leadership as chief of a new division of neuro-infectious diseases and global neurology within the Department of Neurology.

Brian Popko, PhD, Professor of Neurology, joins Northwestern from the University of Chicago where he served as the Scientific Director of the Division of Multiple Sclerosis and Neuroimmunology and Associate Chair for Research of the Department of Neurology. Popko is well-known for his contributions to the understanding of neural cell myelination and demyelinating disorders. He will provide leadership as the Scientific Director of MS and Neuroimmunology within Northwestern’s Department of Neurology.

Sugata Roychowdhury, Professor of Accounting, joins Northwestern from Boston College where he was Professor of Accounting. His research focuses on the influence of managers’ incentives on their reporting and disclosure choices, as well as operational and investment decisions. He is on the editorial board of The Accounting Review and the Journal of Accounting & Economics. He was on the Dean’s “Teaching Star” list at Boston College, and a multiple recipient of the Excellence in Teaching Award while on the faculty in his previous appointment at MIT’s Sloan School of Management.

**The Graduate School Graduation and Admissions Data**
The Graduate School awarded 434 PhD degrees and 911 master’s degrees during the 2019–20 academic year, a decrease from 484 PhD degrees and increase from 905 master’s degrees the year before. TGS anticipates welcoming 582 PhD and 813 master’s students this Fall Quarter, an increase from 534 PhD and 768 master’s students the previous Fall Quarter. Due to the ongoing COVID-19 pandemic, the deferral percentage for the 2020 Fall Quarter was higher than the 2019 Fall Quarter.

**Kellogg, McCormick Announce New MBAi joint Degree Program**
Northwestern’s Kellogg School of Management and McCormick School of Engineering have launched an MBAi joint degree at the intersection of business and technology management. The accelerated five-quarter program responds to a growing and global need for leaders that can spearhead strategic, business-driving innovation while understanding the complexities and nuances of the technologies that enable it. “The MBAi was designed to produce leaders that will tackle the evolving, nuanced business challenges in technology,” Kellogg Dean Francesca Cornelli said. “This expanded partnership with McCormick is a perfect example of our values of creativity and innovation in action.” McCormick dean Julio M. Ottino expressed his enthusiasm for the new program. “We have a long history as partners [with Kellogg] through the MMM program and shared research interests,” he said. “Through a combination of intensive curricular and technology industry experiences, students will be prepared to lead teams that are heavy in technology capabilities and guided by strategies rooted in business needs and return on investment.”
**MS in Data Science in South Asia**
The School of Professional Studies has launched its Master of Science in Data Science program to Indian students, and the greater South Asia region, in partnership with Great Learning, an India-based educational provider associated with Great Lakes Institute of Management. The first cohort will begin in spring 2021. The student experience will be enhanced to better serve South Asian student needs, adding local hands-on weekend experiences and career-oriented workshops focused on the needs of Indian employers. This collaboration leverages SPS’s academic leadership in data science and Great Learning’s expertise in marketing and student recruitment in this area of the world. It also supports Northwestern’s goal to forge global alliances which provide access to our academic programs for new international audiences.

**Research Update**

**Award Funding**
For the third quarter of FY 2020, the total amount of award funding was $479.8 million, a 7.9 percent increase ($35 million) over the same period last year. The number of awards to date (2,153) is a 4.7 percent increase from last year’s total (2,057).

**Research News**
Northwestern a key partner in $115 million national center to build revolutionary quantum computer

Seventeen faculty members from Northwestern’s Weinberg College of Arts and Sciences and the McCormick School of Engineering will contribute their expertise in physics, materials science, and electrical and computer engineering to a major new quantum science research center. The Fermilab-led initiative — one of just five elite National Quantum Initiative centers funded by the U.S. Department of Energy (DOE) — is called the Superconducting Quantum Materials and Systems Center (SQMS) and will focus on building and deploying a beyond-state-of-the-art quantum computer based on superconducting technologies. It will also have an important training and education mission to develop a next-generation quantum workforce. The center director is Fermi scientist Anna Grassellino, who also holds a joint appointment in Northwestern’s physics department. SQMS deputy director James Sauls is a member of Northwestern’s physics department. Sauls also is co-director of another joint Northwestern-Fermi research hub: the Center for Applied Physics and Superconducting Technologies (CAPST). SQMS will focus on research important for medicine, life sciences, national security and physics. Three additional Northwestern faculty from Weinberg College are also members of another major new QIS center called Q-Next, which is affiliated with Argonne National Laboratory. That center, like the Fermi research hub, will bring together a range of academic and industrial partners. Q-Next will draw upon Northwestern’s thought leadership in chemistry and physics to create two national foundries for quantum materials, develop networks of sensors and secure communications systems, establish simulation and network testbeds, and also train individuals for the quantum workforce. The centers are part of a $625 million federal program to facilitate quantum innovation in the United States. Each center is expected to receive $115 million in funding over five years.
Gift Names Epigenetics Institute at Feinberg
A new $15 million gift from University trustees and supporters Louis A. Simpson ’58 (’96 P) and Kimberly K. Querrey (’22 P) will establish the Simpson Querrey Institute for Epigenetics at Northwestern’s Feinberg School of Medicine, boosting the University’s current efforts to study the effects of environment on the regulation of gene expression. This gift, combined with a previous gift of $10 million to start the institute as a center, brings the institute’s funding to $25 million.

Medill awarded $1 million by McCormick Foundation to help improve local news in Chicago
The Medill School of Journalism, Media, Integrated Marketing Communications was awarded $1 million by the Robert R. McCormick Foundation to launch the Metro Media Lab, a comprehensive series of initiatives aimed at improving the local news ecosystem in Chicago. The lab is designed to help local news organizations better engage with citizens; provide quality, solutions-oriented journalism; and strengthen the sustainability of local news organizations through research, training and student-produced storytelling in partnerships with Chicago outlets.

Northwestern launches a national resource to unlock role of metals in human health
The National Institutes of Health (NIH) has awarded Northwestern and partners, including Argonne National Laboratory, a five-year, $8.2 million grant to establish the Resource for Quantitative Elemental Mapping for the Life Sciences (QE-Map). The new national hub will enable unprecedented insights into the role of metals and other inorganic (non-living) elements in human health and disease. QE-Map will leverage Northwestern’s expertise in the areas of biophotonics, cell biology, inorganic chemistry and X-ray physics to pioneer cutting-edge imaging and detection technologies to deepen understanding of the interplay between metals and biological processes. The initiative is spearheaded by Northwestern’s Chemistry of Life Processes Institute. The QE-Map leadership team also includes Chris Jacobsen, an Argonne Distinguished Fellow who also is a professor of physics and astronomy at Weinberg, and professors Hao Zhang and Cheng Sun of Northwestern’s McCormick School of Engineering.

Independent panel of national legal experts to review conviction of Myon Burrell
A panel of national legal experts from the Center on Wrongful Convictions at Northwestern Pritzker School of Law and the Innocence Project (affiliated with the Benjamin N. Cardozo School of Law at Yeshiva University) will conduct an independent review of the case of Myon Burrell, a Minnesota man currently serving a life sentence in prison following his conviction for the 2002 murder of 11-year-old Tyesha Edwards. At the time of Tyesha Edwards’ death, Burrell was 16 years old. Burrell’s conviction has received a great deal of media scrutiny in recent months, after the Associated Press published an investigative report about his case on February 1. Northwestern Professor Laura Nirider, co-director of the Center on Wrongful Convictions at Northwestern Law, and Professor Barry Scheck, co-founder of the Innocence Project, will serve as the panel’s advisors who will provide consultation on Conviction Integrity best practices.

Northwestern start-up wins inaugural Nature prize
Tech startup Sibel Health — cofounded by Northwestern’s John A. Rogers and Steve
Xu — has received The Spinoff Prize, a new, highly competitive, international award from the journal Nature. Sibel won the journal’s inaugural award for its affordable, wireless sensor system to monitor premature babies in the neonatal intensive care unit, based on research from Rogers’ lab. In partnership with Merck, Nature established The Spinoff Prize to honor academic entrepreneurs who commercialize their research. “This work has been a truly collaborative effort,” said Rogers, the Louis Simpson and Kimberly Querrey Professor of Materials Science and Engineering, Biomedical Engineering and Neurological Surgery. “As engineers, we want to develop technologies that are easy-to-use, helpful and practical. This type of team science has been uniquely enabled by Northwestern’s Querrey Simpson Institute for Bioelectronics (QSIB), which connects experts from backgrounds in engineering, medicine and human health to enable translational science across a broad variety of applications.”

Lori Edmo selected as 2020 NAJA-Medill Milestone Achievement Award recipient
The Medill School of Journalism, Media, Integrated Marketing Communications and the Native American Journalists Association selected Lori Edmo (Shoshone-Bannock) as the 2020 NAJA-Medill Milestone Achievement Award recipient. Editor of Sho-Ban News, Edmo was selected based on her body of work, her contributions to society and the advancement of Native Americans in the field of journalism, and commitment to NAJA and its values. “I am proud to continue our collaboration with NAJA in recognizing journalistic contributions of Native Americans,” said Medill Dean Charles Whitaker. “Lori is doing the important work of elevating stories of Indigenous communities, which need to be included in mainstream media.

Return to Research
“Return to Research” was the topic for the Aug. 20 Return to Campus Discussion Series session, and was co-hosted by Vice President for Research Milan Mrksich and Chief Risk and Compliance Office Luke Figora. Panelists for the discussion featured Associate Vice Presidents for Research Ann Adams and Dr. Richard D’Aquila, and Interim Dean of The Graduate School Kelly Mayo. Mrksich provided a detailed summary of how the Office for Research in tandem with the Provost’s Office, Risk Management, and other University partners have managed to keep the research enterprise thriving throughout the global pandemic. He and the other participants also addressed a range of questions relevant for the research community, including inquiries related to health and safety protocols in laboratories and other campus research spaces. While the University’s research enterprise has been operating at a high level even during the State of Illinois stay-at-home order and through the summer-long phased return to campus, planning has continued in anticipation of the Fall Term and in-person education.

Research Highlights
New pill could prevent anaphylaxis in people with food, drug allergies
A recent Northwestern Medicine study published in the June 2 Journal of Clinical Investigation shows there might be a pill that can be taken proactively to prevent mild to life-threatening anaphylaxis, no matter the cause. A severe, potentially life-threatening systemic allergic reaction, anaphylaxis can occur within seconds or minutes of exposure to an allergen. The drugs used in the study block the BTK (Bruton’s tyrosine kinase) enzyme, which allergens and allergic antibodies require to release histamine and
other allergic mediators in mast cells. This would be the first known treatment to prevent anaphylaxis other than avoiding the allergen. The findings could pave the way for future human clinical trials of such oral drugs to be used as a preventive treatment to avoid serious allergic reactions, said senior and corresponding author Dr. Bruce Bochner, the Samuel M. Feinberg Professor of Medicine at Northwestern’s Feinberg School of Medicine.

Females still an afterthought in research
A new Northwestern Medicine study, published June 9 in the journal eLife, has found females are still an afterthought in most scientific research. The study is a 10-year follow-up to a 2009 groundbreaking study that found females were left out of biomedical research because of how their hormones might skew fragile study designs, an idea that has repeatedly been proven false. That left only male subjects to represent both men and women in research findings. The new study authors analyzed more than 700 scientific articles across nine biological disciplines to determine if a sex bias still exists within biomedical research. They found that the number of studies to include both male and female subjects increased from 28% in 2009 to 49% in 2019, but there was no increase in the number of studies to analyze data by sex between 2009 and 2019. “The implications of not analyzing research data by sex are endless,” said Nicole Woitowich, associate director of the Women’s Health Research Institute and research assistant professor at Northwestern’s Feinberg School of Medicine. “Without this, we have no way of telling if or how new drugs and therapies may work differently in men and women. It hinders progress toward personalized medicine and it also makes it difficult for scientists to repeat studies and build upon prior knowledge.”

Artificial intelligence tool lays groundwork for autism early diagnosis and intervention
A novel precision medicine approach enhanced by artificial intelligence (AI) has laid the groundwork for what could be the first biomedical screening and intervention tool for a subtype of autism, reports a new study from Northwestern University, Ben Gurion University, Harvard University and the Massachusetts Institute of Technology. The approach is believed to be the first of its kind in precision medicine, and the findings were published Aug. 10 in Nature Medicine. Study co-first author Dr. Yuan Luo, associate professor of preventive medicine: health and biomedical informatics at the Northwestern’s Feinberg School of Medicine, said that the new study is groundbreaking in that it is the first to overlay an array of biomedical and health care data, including genetic mutation data, and then leverage an AI-enhanced precision medicine approach to help define “one of the world’s most complex inheritable disorders.” Luo is also chief AI officer at the Northwestern University Clinical and Translational Sciences Institute (NUCATS).

Tiny pump builds polymers with precision
Northwestern researchers have developed the most precise way to build polyrotaxanes, a mechanically locked polymer for slide-ring gels, battery electrode materials and drug-delivery platforms. A necklace-like molecule made with rings threaded onto a polymer string, polyrotaxanes are notoriously difficult to construct. A new method from the laboratory of Nobel Prize-winning chemist Sir Fraser Stoddart uses two artificial molecular pumps to install rings onto each end of a polymer string. “These polyrotaxanes have never before been made with such precision,” said Stoddart, the
Board of Trustees Professor of Chemistry in the Weinberg College of Arts and Sciences. “Without the ability to define accurately the polymer’s structure, you cannot fine-tune the material’s overall properties.” The team’s research paper was published June 12 in the journal Science. Yunyan Qiu, a postdoctoral fellow in Stoddart’s lab, is the paper’s first author.

**Synthetic materials mimic living creatures**
Northwestern researchers have developed a family of soft materials that imitates living creatures. When hit with light, the film-thin materials bend, rotate and crawl on surfaces. Called “robotic soft matter,” the Northwestern team believes the lifelike materials could have potential applications in energy, environmental remediation and advanced medicine. “We live in an era in which increasingly smarter devices are constantly being developed to help us manage our everyday lives,” said Northwestern’s Samuel I. Stupp, who led the experimental studies. “The next frontier is in the development of new science that will bring inert materials to life for our benefit — by designing them to acquire capabilities of living creatures.” The research was published June 22 in the journal Nature Materials. Stupp is the Board of Trustees Professor of Materials Science and Engineering, Chemistry, Medicine and Biomedical Engineering and director of the Simpson Querrey Institute.

**What is causing wage stagnation among workers without college education in the United States?**
In a working paper published recently by the National Bureau of Economic Research, economists Matthias Doepke of Northwestern University and Ruben Gaetani of the University of Toronto say that lack of employment protection is responsible for rising inequality among U.S. workers and stagnating wages for those with less education. In their model, the investigators found that employment protection creates an expectation of long-lasting jobs, which provides incentives for workers and employers for investing in the relationship. Workers invest more in job-specific skills, and employers create more jobs that reward such investment. Doepke is a professor of economics in the Weinberg College of Arts and Sciences.

**LIGO-Virgo finds mystery astronomical object in ‘mass gap’**
An international research collaboration, including Northwestern astronomers, has detected a mystery object inside the puzzling area known as the “mass gap” — the range that lies between the heaviest known neutron star and the lightest known black hole. Now, in a new study from the National Science Foundation’s Laser Interferometer Gravitational-Wave Observatory (LIGO) and the European Virgo observatory, scientists have announced the discovery of an object of 2.6 solar masses, placing it firmly in the mass gap. The finding has important implications for astrophysics and the understanding of low-mass compact objects. “Mergers of a mixed nature — black holes and neutron stars — have been predicted for decades, but this compact object in the mass gap is a complete surprise,” said Northwestern’s Vicky Kalogera, a leading astrophysicist in the LIGO collaboration. Kalogera is the Daniel I. Linzer Distinguished University Professor of Physics and Astronomy in the Weinberg College of Arts and Sciences and director of CIERA (Center for Interdisciplinary Exploration and Research in Astrophysics). The new findings were published June 23 by The Astrophysical Journal Letters.
New biomaterial could shield against harmful radiation
Northwestern University researchers have synthesized a new form of melanin enriched with selenium. Called selenomelanin, this new biomaterial shows extraordinary promise as a shield for human tissue against harmful radiation. “Given the increased interest in space travel and the general need for lightweight, multifunctional and radioprotective biomaterials, we’ve become excited about the potential of melanin,” said Northwestern’s Nathan Gianneschi, who led the research. Gianneschi is the Jacob and Rosalind Cohn Professor of Chemistry in the Weinberg College of Arts and Sciences and associate director of the International Institute for Nanotechnology. Gianneschi’s team hypothesized, however, that a new kind of melanin — enriched with selenium instead of sulfur — would provide better protection against X-rays. The research team’s results demonstrated that selenomelanin offers superior protection from radiation. They envision that this new material could be applied to a person’s skin or as a protective film to shield materials from radiation while in transit.

Northwestern, MIT Researchers Develop Novel Materials for Energy and Sensing
A team of researchers from Northwestern University and the Massachusetts Institute of Technology (MIT) has demonstrated the ability to fine-tune the electronic properties of hybrid perovskite materials, which have drawn enormous interest as potential next-generation optoelectronic materials for devices such as solar cells and light sources. The materials are classified as “hybrid” because they contain inorganic components like metals as well as organic molecules with elements like carbon and nitrogen, organized into nanoscale layers. The researchers showed that by strategically varying the composition of the organic layers, they could tune the color of light absorbed by the perovskite and also the wavelength at which the material emitted light. Importantly, they accomplished this without substantially changing the inorganic component. Samuel Stupp is co-corresponding author on the paper that was published July 6 in the journal Nature Chemistry.

Fair justice systems need open data access
Although U.S. court documents are publicly available online, they sit behind expensive paywalls inside a difficult-to-navigate database. A Northwestern University-led team says these barriers prevent the transparency needed to establish a fair and equal justice system. “In principle, litigation is supposed to be open to the public,” said Northwestern McCormick School of Engineering data scientist Luís A. Nunes Amaral, the Erastus Otis Haven Professor of Chemical and Biological Engineering. “In reality, the lack of access to court records seemingly undercuts any claim that the courts are truly ‘open.’” The new insights were published July 10 in the journal Science. Amaral is the paper’s corresponding author. His co-authors include computer and data scientists, legal scholars, journalists and policy experts. Northwestern artificial intelligence researcher Kristian Hammond (the Bill and Cathy Osborn Professor of Computer Science in the McCormick School) and the C3 Lab are developing an A.I. platform that provides users with access to the information and insights hidden inside federal court records, regardless of their data and analytics skills.

New therapy extends breast cancer survival rate, prevents reoccurrence
A new immunotherapy developed by researchers at Northwestern University dramatically extends the survival time of mice with triple negative breast cancer, one of
the most aggressive and difficult-to-treat forms of breast cancer. In a new study, mice treated with the therapy, which comprises two immunity-boosting drugs housed inside a nanoparticle, experienced complete tumor remission for at least 100 days. All untreated mice died by day 30. None of the treated mice experienced adverse side effects or autoimmune responses. The nanoparticle, called a spherical nucleic acid (SNA), is a globular form of DNA that can easily enter and stimulate immune cells.

Northwestern’s Chad A. Mirkin, who led the study and invented SNAs, credits the nanoparticle’s shape and structure for the immunotherapy’s success. “This finding is opening doors in an emerging field we call ‘rational vaccinology’ and could lead to treatments for many different types of cancer,” said Mirkin. The findings were published online in the July Proceedings of the National Academy of Sciences. Mirkin is the George B. Rathmann Professor of Chemistry in Northwestern’s Weinberg College of Arts and Sciences, director of the International Institute of Nanotechnology.

Spectacular ultraviolet flash may finally explain how white dwarfs explode

For just the second time ever, astrophysicists have spotted a spectacular flash of ultraviolet (UV) light accompanying a white dwarf explosion. An extremely rare type of supernova, the event is poised to offer insights into several long-standing mysteries, including what causes white dwarfs to explode, how dark energy accelerates the cosmos and how the universe creates heavy metals, such as iron. “The UV flash is telling us something very specific about how this white dwarf exploded,” said Northwestern astrophysicist Adam Miller, who led the research. Miller is a fellow in Northwestern’s Center for Interdisciplinary Exploration and Research in Astrophysics (CIERA).

When inequality is significant, free markets are not necessarily the way to go, says Northwestern economist

One of the most classic intuitions in economics is the idea that competitive markets are the best way to allocate resources in society. However, in a paper published July 8 in the journal Econometrica, economists Piotr Dworczak of Northwestern, Scott Duke Kominers of Harvard and Mohammad Akbarpour of Stanford conclude that free markets are optimal under some circumstances — but at other times price controls can be a better solution, particularly when there’s significant societal inequality. Dworczak is assistant professor of economics in the Weinberg College of Arts and Sciences.

Widespread electric vehicle adoption would save billions of dollars, thousands of lives

Northwestern University researchers have combined climate modeling with public health data to evaluate the impact of electric vehicles (EVs) on U.S. lives and the economy. A new study found that if EVs replaced 25% of combustion-engine cars currently on the road, the United States would save approximately $17 billion annually by avoiding damages from climate change and air pollution. In more aggressive scenarios — replacing 75% of cars with EVs and increasing renewable energy generation — savings could reach as much as $70 billion annually. Daniel Horton, senior author of the study published online Aug. 13 in the journal GeoHealth, is an assistant professor of Earth and planetary sciences in the Weinberg College of Arts and Sciences.

Innovative cities follow a unique historical pattern, study shows

A new study from Northwestern’s Kellogg School of Management revealed a unique
historical pattern that cities follow to become strong and innovative economies. Population size seems to be the key driver propelling urban economies to new heights, according to Kellogg’s Hyejin Youn, assistant professor of management and organizations and corresponding author for the study published Aug. 21 in by Scientific Advances. Another key factor is also the city’s ability to attract and retain certain industries that tend to grow faster than population growth, including arts and entertainment, professional services, and science and information technology. Youn calls these “superlinear industries.” “What we observed is not a blip in history,” Youn said. “These two factors go hand in hand and depend on one another.” In contrast, sublinear industries are those whose growth rate is less than the population size. These include primary industries such as fishing, agriculture, mining and manufacturing. “These are industries that need geographical resources in order to grow, which obviously doesn’t scale with the size of the city,” Youn said. “They’re also less dependent on human interaction and population.” The researchers analyzed industrial employment and population changes in 350 U.S. cities between 1998 and 2013, including over 100 million workers. They observed a transition to innovative economies when the population reaches 1.2 million people.

**COVID-19 Research**

Material can withstand damage from disinfection, enabling masks to be safely reused
Northwestern University’s Mark Hersam received a $200,000 rapid response research (RAPID) grant from the National Science Foundation in May to develop a new elastic material that could enable N95 medical face masks to be disinfected and reused dozens of times. Hersam, a Walter P. Murphy Professor of Materials Science and Engineering in the McCormick School of Engineering, and his team are developing a new type of elastic composite based on hydrated graphene oxide (hGO), a material that shows resistance to ultraviolet radiation and has proven intrinsic antimicrobial properties. To disinfect equipment, including N95 masks, medical professionals use ultraviolet germicidal irradiation (UVGI). While the widely used technique is highly effective in killing or inactivating pathogens, such as viruses and bacteria, UVGI also rapidly ages plastics and rubber. By incorporating Hersam’s composite material into N95 masks, the elastic components could better withstand UVGI and continue to maintain a snug fit even after being reused dozens of time.

Virus-deactivating mask project receives NSF RAPID grant
A research team led by Associate Professor of Chemistry Omar Farha received a $200,000 grant from the National Science Foundation in May to develop a chemically modified face mask that can deactivate viruses, including the novel coronavirus that causes COVID-19. In addition to reducing the spread of the virus, the innovation will allow healthcare workers to re-use protective face masks, which are in critically short supply. Farha, a faculty member in the Weinberg College of Arts and Sciences, works with metal-organic frameworks, or MOFs — nano-sized, spongelike materials that can capture gases, vapors and other agents. In December, Farha published a study explaining how he and his research team had created a zirconium-based MOF that in minutes could degrade some of the most toxic chemical agents known to mankind.

Placentas from COVID-19-positive pregnant women show injury
The placentas from 16 women who tested positive for COVID-19 while pregnant showed
evidence of injury, according to pathological exams completed directly following birth, reports a recent Northwestern Medicine study published May 22 in the American Journal of Clinical Pathology. It is the largest study to examine the health of placentas in women who tested positive for COVID-19. The findings, though early, could help inform how pregnant women should be clinically monitored during the pandemic. “Most of these babies were delivered full-term after otherwise normal pregnancies, so you wouldn’t expect to find anything wrong with the placentas, but this virus appears to be inducing some injury in the placenta,” said senior author Dr. Jeffery Goldstein, assistant professor of pathology at Northwestern’s Feinberg School of Medicine and a Northwestern Medicine pathologist.

Wearable COVID-19 sensor receives NSF RAPID grant
A research team led by Northwestern University bioelectronics pioneer John A. Rogers has received a $200,000 grant from the National Science Foundation (NSF) to continue developing a novel wearable device and set of algorithms specifically tailored to catch early signs and monitor progression of COVID-19. In partnership with researchers at Shirley Ryan AbilityLab, Rogers launched the device in April. The NSF funding will help Rogers and his team incorporate more advanced data analytics into the device and add a sensor to measure oxygen levels in the blood. Adding blood oxygen levels will help the device and its accompanying algorithms give a fuller picture of the disease’s onset, progression and response to treatment. “Our device addresses a key issue in the COVID-19 pandemic: the limited capacity of healthcare systems,” Rogers said. “By continuously monitoring high-risk individuals, such as healthcare workers and the elderly, we can minimize the number of unnecessary hospital visits and provide an early warning to enable preventive measures.”

COVID-19 threatens the entire nervous system
A new review of neurological symptoms of COVID-19 patients in current scientific literature reveals the disease poses a global threat to the entire nervous system, reports a Northwestern Medicine study published in the June Annals of Neurology. About half of hospitalized patients have neurological manifestations of COVID-19, which include headache, dizziness, decreased alertness, difficulty concentrating, disorders of smell and taste, seizures, strokes, weakness and muscle pain. “It’s important for the general public and physicians to be aware of this, because a SARS-COV-2 infection may present with neurologic symptoms initially, before any fever, cough or respiratory problems occur,” said lead author of the review, Dr. Igor Koralnik, Northwestern Medicine chief of neuro-infectious diseases and global neurology and a professor of neurology at Northwestern’s Feinberg School of Medicine.

More lonely deaths in hospitals and nursing homes from COVID
Patients who died from COVID in 2020 were almost 12 times more likely to die in a medical facility than patients who died from any cause in 2018, reports a new Northwestern Medicine study. This is the first study to look at place of death for patients with COVID-19 and how these distributions compare to previous trends in location of death for non-COVID-19 illnesses. “Where you die is important and reflects end-of-life quality for the patient and the family,” said lead author Dr. Sadiya Khan, assistant professor of preventive medicine in epidemiology at Northwestern’s Feinberg School of Medicine and a Northwestern Medicine physician. The new study analyzed data from
the Centers for Disease Control and Prevention for deaths related to COVID-19 from 
February 1 to May 23, 2020, and found 68.7% of patients who die of COVID-19 died in 
medical facilities, 22.7% in nursing homes, 5.2% at home and 1.9% in hospice 
facilities. When compared with 2018 deaths due to all causes over a similar time 
period, 35.7% of deaths took place in medical facilities, 19.1% in nursing homes, 31.1% at 
home, and 7.9% in hospice facilities.

Popular hypertension drugs don’t increase risk of COVID-19 severity, fatality
A new Northwestern Medicine study in mice found a widely used class of drugs to treat 
patients with hypertension, cardiovascular disease and diabetic kidney disease — many 
of whom are elderly — does not increase the risk of developing a severe and potentially 
fatal COVID-19 infection, as previously feared. The study supports the safety of these 
drugs in the face of the COVID-19 pandemic. “This study supports the concept that there 
is no increased risk for COVID-19 infection by using ACE inhibitors and angiotensin 
receptor blockers,” said Daniel Batlle, the Earle, del Greco, Levin Professor of Medicine 
at Northwestern’s Feinberg School of Medicine and a Northwestern Medicine 
nephrologist. The paper was published recently in the Journal of the American Society 
of Nephrology.

COVID-19 and seniors: a look at racial health disparities
Northwestern epidemiologist Mercedes Carnethon testified virtually before the U.S. 
Senate July 21 at the hearing on “The COVID-19 Pandemic and Seniors: A Look at 
Racial Health Disparities.” The Mary Harris Thompson Professor and vice chair of 
preventive medicine and professor of medicine in pulmonary and critical care at 
Northwestern’s Feinberg School of Medicine, Carnethon was part of a small expert panel 
to help senators better understand the challenges and identify meaningful solutions. 
The focus of the hearing was on COVID-19’s disproportionate health impacts on Black 
and Latino seniors, as well as seniors from other racial and ethnic minority 
communities. At the hearing, Carnethon made several recommendations to mitigate the 
impact of COVID-19 on minority older adults, based on her experience as a populations 
science researcher. These recommendations included expanding the digital 
infrastructure and training available to older adults to support videoconferencing for 
telemedicine and engaging the communities who have been hardest hit by COVID-19.

Northwestern launches COVID-19 registry for vaccine trials
Northwestern Medicine has launched a COVID Prevention Trials Registry for people 
who are interested in participating in COVID-19 clinical trials to prevent infection from 
the virus. Participants in the registry will be contacted when an appropriate study based 
on their health profile is being conducted. The goal is to recruit 5,000 individuals for the 
COVID Prevention Trials Registry. The research is being sponsored by Feinberg. “We 
want to recruit participants in the Chicago area who are at risk for exposure to COVID-
19 and who are potentially interested in participating in different studies for prevention 
of the infection,” said Dr. Karen Krueger, the principal investigator of the registry. She is 
a Northwestern Medicine physician and instructor in infectious diseases at Feinberg 
School of Medicine.

COVID-19 risk model uses hospital data to guide decisions on social distancing
With communities throughout the United States combating surges in COVID-19 cases
and hospitalizations, researchers at The University of Texas at Austin and Northwestern University have created a framework that helps policymakers determine which data to track and when to take action to protect their communities. The model specifies a series of trigger points to help local entities know when to tighten social distancing measures to prevent hospitals from being overrun by virus patients. The method also aims to minimize the economic impact to communities by suggesting the earliest times for safely relaxing restrictions. David Morton, chair and professor of industrial engineering and management sciences at Northwestern’s McCormick School, is a co-author of the paper. The framework, which is described in a paper published in the July Proceedings of the National Academy of Sciences, combines two mathematical models: an underlying model that predicts how the pandemic will likely spread and an optimization model that uses admissions data from Austin hospital systems. It attempts to walk a fine line of preventing economic disaster and keeping hospital systems from becoming overwhelmed. Though the researchers used Austin data, the framework can easily be used by other communities with publicly available hospital admissions data.

Survey: Most Americans willing to vaccinate for COVID-19
According to the latest results from an ongoing national survey of attitudes about COVID-19, two-thirds (66%) of Americans say they are either “somewhat” or “extremely” likely to vaccinate themselves and their children against the novel coronavirus when such a vaccine becomes available. The survey’s researchers include Northwestern experts and is part of the four-university “COVID-19 Consortium for Understanding the Public’s Policy Preferences Across States.” The investigators discovered racial disparities in vaccination likelihood. “One of the most notable findings is the racial disparity with African-Americans reporting substantially lower likelihoods of being vaccinated,” said James Druckman, the Payson S. Wild Professor of political science in the Weinberg College of Arts and Sciences and associate director of the University’s Institute for Policy Research. “Given the disproportional effect the virus has had on African-Americans, this is an important gap to consider moving forward.”

Enthusiasm for a potential COVID-19 vaccine varied greatly across the states.

Research exposes new vulnerability in SARS-CoV-2
Northwestern University researchers have uncovered a new vulnerability in the novel coronavirus’ infamous spike protein — illuminating a relatively simple, potential treatment pathway. Researchers designed a molecule to effectively block the virus from bonding to the host cell. The research was published online Aug. 2 in the journal ACS Nano. “Our work indicates that blocking this cleavage site may act as a viable prophylactic treatment that decreases the virus’ ability to infect humans,” said Northwestern’s Monica Olvera de la Cruz, who led the research. “Our results explain experimental studies showing that mutations of the SARS-CoV-2 spike protein affected the virus transmissibility.” With this new information, Olvera de la Cruz, the Lawyer Taylor Professor of Materials Science and Engineering in the McCormick School of Engineering, and her team now plan to work with Northwestern chemists and pharmacologists to design a new drug that could bind to the spike protein.

COVID-19 pandemic should be a wake-up call for water security
Urgent action on water security is essential to better prepare societies for future global health crises, say researchers Northwestern University and the University of
Birmingham in the UK. In an opinion piece published in Nature Sustainability on Aug. 24, researchers urge policymakers across the world to focus on behavioral change, knowledge promotion and investment in water infrastructure. The call to action follows studies revealing nearly a quarter of households in low- and middle-income countries have been unable to follow basic guidelines on handwashing, which is recognized as critical for preventing the spread of the coronavirus pandemic. “This is a great example of how our HWISE scale, which measures household water insecurity experiences, makes visible the often invisible crisis of water insecurity,” said Sera L. Young, associate professor of anthropology in the Weinberg College of Arts and Sciences and faculty fellow with the Institute for Policy Research and the Center for Water Research.

**Administrative Update**

**Northwestern to Partner with Northwestern Medicine to Deliver Student Health Service**
Starting September 1, Northwestern Medicine (NM) began managing and overseeing the clinical operations of the Northwestern University Health Service, which handles student health on Evanston and Chicago campuses. (NM previously provided services on the Chicago campus.) NM is also providing on-site COVID-19 testing, contact tracing, and case management processes. The University will continue to oversee its behavioral and mental health services, including Counseling and Psychological Services (CAPS), and the mission and effectiveness of the student health service.

**Njoki Kamau named Jean E. Shedd Award Winner**
Njoki Kamau, associate director of the Women’s Center at Northwestern University, has been named the 2020 Jean E. Shedd University Citizenship Award winner. Kamau, who has been at Northwestern for 28 years, was the first Black woman to pursue a Ph.D. at the Kellogg School of Management. She has been a community leader and expert on gender-based violence. During her nearly three decades at Northwestern, Kamau has impacted University policy, programming and structure by advocating for women, people of color, immigrants and LGBTQ community members. She has helped create numerous Northwestern policies and procedures, including the University’s first harassment and civility policies.

**Government Relations**
Over the past year Northwestern Government Relations has pursued directed Department of Defense research funding. In FY 20 Northwestern secured a $5 million award for the Center for UAS Propulsion (CUP) within the Army Research Lab, a research collaboration between national and defense labs, universities, including Northwestern, and industry in order to address the Army’s need for advances in Unmanned Aircraft System (UAS) propulsion systems. Northwestern received its funding in July to investigate the development and production of lightweight aluminum alloys with key characteristics for UAS. The research builds on Northwestern’s expertise in additive manufacturing and manufacturing simulations. Northwestern Federal Relations team is pursuing continuing funds for this project and funding for other projects in FY 21.
Community Relations
Northwestern committed $1.5 million toward advancing racial equity and social justice in Evanston and Chicago. The University will contribute $1 million in FY 21 to the City of Evanston for a sixth consecutive year, and is expanding its commitment with the creation of a new $500,000 Racial Equity and Community Partnership grants program administered by the Office of Neighborhood and Community Relations. This unprecedented commitment will bolster the University’s reputation as a socially engaged institution and strengthen our home communities by dismantling systemic barriers faced by historically marginalized communities.

Global Marketing and Communication
COVID-19 University-wide Marketing & Communications Strategy
The Office of Global Marketing and Communication (OGMC) continues to lead a dedicated rapid-response team to coordinate communication efforts across schools and units, while also continuing to consult on and craft University-wide communications from senior leadership on a daily basis. The COVID-19 and Campus Updates website remains Northwestern’s central source for top-level messaging, developments, and other vital information. The website also houses the recently launched COVID Case Tracker, which is updated weekly and compiles figures and primary campus locations for positive cases on campus. OGMC leads a University-wide internal communications campaign under the umbrella theme line – We’re N This Together – to communicate a common purpose and collective commitment to health and safety. In partnership with Facilities Management, OGMC also developed a cohesive signage program to prepare University spaces for a phased return-to-campus.

Top News Stories
As of August 31, top stories include Vadim Backman’s research on the correlation between vitamin D deficiency and mortality rates (reach: 90 million); Feinberg’s Ankit Bharat led Northwestern Medicine in a double lung transplant surgery for a COVID-19 patient (reach: 75 million); Matthias Doepke and Jane Olmstead-Rumsey’s research that finds women will be disproportionately impacted by this recession compared to men (reach: 52 million); Martin Eichenbaum’s and Sergio Rebelo’s research weighing economic impact against the number of lives saved (reach: 42 million); Diane Schanzenbach’s work about food insecurity and the safety net (reach: 38 million).

Commencement
Total online viewership for Northwestern’s Class of 2020 Virtual Commencement was 13,031. OGMC played a vital role in executing the first virtual commencement, consulting on run-of-show production and developing core program elements. OGMC prioritized authentic social media content that weaved in our unique celebration and connection of students using the hashtag #NU2020. Other content shared included the alma mater video, 2020 arch banner image, celebrity alumni video and Northwestern Now story and accompanying campus photos. There were approximately 1,750 mentions of the #NU2020 hashtag on Commencement day alone. Top Influencers were Trustee Mike Wilbon, and alumni Cody Keenan and JA Adande, as well as Mayor Lori Lightfoot. Their posts contributed to an earned estimated reach of 29 million.
**Athletics Update**  
**Big Ten Fall Competition**  
On August 11, the Big Ten Conference announced the postponement of the 2020-21 fall sports (cross country, field hockey, football, soccer and volleyball) season, including all regular-season contests and Big Ten Championships and Tournaments, due to ongoing health and safety concerns related to the COVID-19 pandemic. In making its decision, the Big Ten Conference relied on the medical advice and counsel of the Big Ten Task Force for Emerging Infectious Diseases and the Big Ten Sports Medicine Committee. After continued consideration the Big Ten Council of Presidents and Chancellors adopted significant medical protocols and voted unanimously on September 16 to resume the football season starting the weekend of October 23-24, 2020. Announcements on sports other than football are forthcoming.

**The Foundation: Expect Victory**  
As part of the 25th anniversary celebration of the 1995 Big Ten champions, and Northwestern’s last trip to the Rose Bowl, the Emmy Award-winning StudioN remotely produced an eight-episode retrospective featuring interviews with nearly 20 student-athletes, coaches and broadcasters from that magical season. The series will air on both Big Ten Network and NBC Sports Chicago and will be available through all Northwestern Athletics digital channels.